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THE REHABILITATION OF THE HEMIPLEGIA*

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THE HEMIPLEGIC PATIENT, who has had a cerebral accident, as a result of embolism or thrombosis, can usually begin rehabilitation activities a few days after the accident. If the hemiplegia is caused by a hemorrhage, rehabilitation procedures should be limited to bed activities for three weeks.

The PURPOSE of a program of rehabilitation is to retrain the patient to walk and travel, care for his daily needs and to obtain the maximum use of the affected and unaffected arm, hand and speech.

The CAUSE of the hemiplegia should be known before starting rehabilitation procedures as the program involves strain and stress on the cardiovascular system. The three principal causes of cerebral accidents are congenital lesions, trauma and disease.

The *congenital* causes may be the result of absence or malformation of the cranial contents, anoxia and injury to the brain by the normal mechanism of labor or forceps.

Traumatic hemiplegia may be caused by fractures, sheer force, bullets, or the result of surgical procedures.

Disease may produce the paralysis by alteration of the architecture of the blood vessels through the pathological media of spasm, thrombosis, emboli, or hemorrhage. These changes usually result from cardiovascular disease.

DISABILITIES which result from a cerebral accident are limitation of motion of the joints on the affected side and a spastic or flaccid paralysis. There may be a facial paralysis and if the paralysis occurs in the dominant arm, the patient will usually have a sensory and motor aphasia.

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EVALUATION OF THE DISABILITIES. If treatment is started early there will be no limitation of motion at the joints and the affected arm and leg can be passively moved through their normal range. If, however, the patient is not given early rehabilitation, contractures usually result, especially at the shoulder.

A flaccid hemiplegia only occurs in a small percentage of patients. The usual spastic hemiplegia presents the following signs:

The affected *arm* is internally rotated and adducted and the forearm, wrist and fingers are flexed. When the patient is asked to move his affected arm, he will elevate the shoulder and abduct and internally rotate the arm. When the patient's *leg* is fully extended voluntary dorsal flexion of the foot is impossible. When, however, the knee is flexed and the patient flexes his hip against resistance, the foot will dorsiflex and supinate. (Strumpell's phenomena).

Some individuals may have an angiospasm of the cerebral vessels and present a typical hemiplegic syndrome. There is usually a complete return of function in a few days. If a patient has a normal return of function in the upper extremity the lower extremity will usually be found to be normal.

The *speech* disability should be evaluated by a speech pathologist.

TREATMENT. The purpose of a program of rehabilitation for the hemiplegic patient is (1) to prevent deformities, (2) to treat deformities if they occur, (3) to retrain the patient in ambulation and elevation activities, (4) to teach the patient to perform the activities of daily living and working with the unaffected arm and hand, (5) to retrain the affected arm and hand to its maximum capacity and (6) to treat the facial paralysis and speech disability if they are present. The rational of treatment is based on man's development of movement through the ages.

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1. PREVENTION OF DEFORMITIES: The spastic hemiplegic patient, when lying in bed holds the upper extremity in adduction and internal rotation with the elbow, wrist and fingers of the affected part in a flexed position. The affected lower extremity is usually flexed and adducted at the hip joint, the knee is flexed and the ankle is plantar flexed and supinated.

If treatment is started within a few days following the cerebral accident there is no need for any special procedures to protect the affected limbs. If, however, due to hemorrhage in the brain or other complications, the patient must remain in bed for a period of time, then procedures must be instituted to prevent deformities.

Procedures. A posterior ankle splint is needed to prevent shortening of the heel cord. A pillow in the axilla will prevent adduction and internal rotation of the shoulder joint which is a frequent residual deformity in hemiplegia. Passive movements of the arm in abduction, external rotation and in the overhead position should be performed several times a day to prevent a "frozen shoulder."

2. TREATMENT OF DEFORMITIES. The principal deformities which occur are a "frozen shoulder" and short heel cord.

Procedures. The use of heat and massage to the arm and shoulder are of value in preparing the part for stretching. Passive movements of the shoulder are useful in increasing the range of motion. These movements can be performed by a therapist, nurse, or by the patient. (See Exercises I. & II.)

A short heel cord seldom requires operative procedures. The heel cord can usually be lengthened with stretching and a short leg brace with a 90 degree to 110 degree stop at the ankle to hold the gains made by stretching and ambulation.

3. AMBULATION. Flexion and extension movements at the hip and knee can usually be performed by the spastic hemiplegia patient who is started on early ambulation. When, however, the hip and knee are flexed, as in walking, the foot dorsiflexes and supinates. The patient is usually afraid to place the supinated foot on the floor because of the danger of injuring the ankle or falling. To prevent this foot movement he walks with the knee joint stiff and circumducts the lower extremity. This is a slow, awkward gait and if used for a period of time the patient will develop a pattern of walking which will be difficult to correct. A double bar short leg *brace* with a stirrup attachment, 90 degree ankle stop and a supinator "T" strap should be prescribed to prevent plantar flexion and supination of the foot and give the patient confidence so that he will flex his knee and hip. With the brace and a cane in the unaffected hand for balance, most hemiplegia patients soon learn to walk without assistance.

A patient with a flaccid hemiplegia from a cerebral accident will be unable to make a voluntary movement when in the supine position. If, however, the patient is held in the erect position with the affected lower extremity on the floor, he will flex and extend the leg as in walking and be able to bear his body weight. The sensory contact of the foot on the floor stimulates the reflex pattern of walking. Ambulation should be the first procedure in the rehabilitation program as it can be accomplished by the majority of patients.

Many patients, especially those in the younger age groups, learn to walk with a good reciprocal pattern without the aid of a cane. No patient, however, seems to learn the reciprocal arm pattern without special training.

The normal pattern of walking is to move the right arm and left leg forward and then the left arm and right leg. The hemiplegic patient walks with the affected arm motionless, adducted and partially flexed at the elbow. It is necessary to break this pattern of walking if the patient is to have the appearance of being normal.

The following methods are suggested for retraining in the normal pattern of walking:

METHOD NO. I. Retraining in walking.

Equipment: Parallel bars with a sliding part over the bars. Round cardboard boxes without the ends removed can be opened on one side and placed over the bars. The open sides can be taped together with adhesive tape to hold them on the bars.

Position: Stand between the bars with one hand on each bar. The affected hand is placed on the movable box and may be tied if necessary.

Instructions: Step forward with the right foot and move the left hand forward along the bar. Step forward with the left foot and move the right hand along the bar.

Repeat 5 times several times a day.

METHOD NO. II. Retraining in walking.

Equipment: None.

Position: Standing with feet together and arm at the side.

Instructions: Step forward with the right foot and swing the left arm forward and point to the right foot. Step forward with the left foot and swing the right arm forward and point to the left foot. The opposite arm and leg must be moved together and remain parallel at all times.

Repeat 5 times several times a day.

For children a red ribbon is tied to the right wrist and left foot and a yellow ribbon to the left wrist and right foot. The children are instructed to move the red ribbons forward and then the yellow ribbons.

When the patient can walk with the reciprocal pattern of arm and leg movements and talk with the instructor the pattern is formed and the patient is retrained.

4. THE UPPER EXTREMITIES. As a return of function in the affected upper extremity cannot be expected for a long period of time, if it ever does return, it is essential to teach the patient to care for his daily needs with his *unaffected arm.* "A lobster can grow a claw, a man cannot, but he has what the lobster does not have, a brain to meet the needs of the situation."

A right hemiplegia in a right-handed person is a serious disability because of the sensory and motor aphasia and the lack of skill in the left hand to perform the activities essential for daily living. The training of the left hand should be started early as the patient must become left handed if he ever hopes to care for his daily needs. Simple tasks in eating and dressing should be started. Left-hand writing must be practiced as this is an important means of communication, especially when speech is affected.

Training of the affected arm is started while the patient is developing one-handed skills with the unaffected arm. If the arm is flaccid, a reeducation program similar to that used in poliomyelitis, should be started. Many of these patients have a complete return of function if muscle reeducation is carefully given over a long period of time. The rehabilitation of the spastic arm should start at the shoulder. The most difficult shoulder movement for the patient to regain is external rotation. Flexion and extension of the forearm is difficult for the spastic hemiplegic to perform. When asked to flex the elbow, he elevates the shoulder and abducts and internally rotates the arm. Pronation and supination of the hand are usually impossible, as these are the last movements learned by man and the last to return. Internal and external rotation of the arm are primitive movements and the patient attempts to substitute these movements for pronation and supination. The fingers and thumb are usually flexed tightly. If the fingers and thumb are forced open they can be flexed but active extension movements are usually impossible. On yawning, the fingers of the hand usually extend.

THE EXERCISE PROGRAM for retraining the affected arm depends upon the patient.

Results cannot be expected by having a therapist work *on* the patient. Working *with* the patient so that he understands what exercises are to be practiced many times a day is the only procedure which will improve the disabled arm.

EXERCISE I. Flexion of the arm at shoulder.

Purpose: To maintain, or increase, the shoulder movements and to strengthen the shoulder girdle muscles.

Positions: Sitting on a chair or lying supine in bed.

Instructions: The patient grasps the wrist of the affected arm with the fingers of the unaffected arm. He raises the arms forward upward as far overhead as possible.

Repeat 5 times on the hour.

EXERCISE II. Flexion and Extension of the forearm.

Purpose: To obtain full range of motion at the elbow and active flexion and extension of the elbow without abduction.

Position: Sitting in a chair, elbows close to side of body and palms of the hands together with the ulna side of the hands resting on the affected knee.

Instructions: He flexes the forearms and touches the chin.

Repeat 5 times on the hour.

The patient may have difficulty in opening the spastic fingers with the unaffected fingers but the best possible position should be obtained. This is a good exercise in preventing flexion contractures of the fingers.

It is an interesting neuromuscular phenomena that when the hands are clasped, or even brought in contact, the elbow can be flexed without any abduction of the shoulder. When the hands are separated and the patient is asked to flex the elbow, the affected arm will abduct and rotate inward.

EXERCISE III. Flexion and extension of the forearm and supination and pronation of the hand.

Purpose: To combine flexion and extension of the elbow with supination and pronation of the hand.

Position: As in Exercise II.

Instructions: The patient places his palms together as in Exercise II, flexes the forearm and supinates the affected hand as he raises it to the chin. On extension of the forearm the hand is pronated.

Repeat 5 times on the hour.

The tight supinator muscles of the affected arm can be stretched by the unaffected hand. Flexion of the elbow with supination of the hand are the most useful movements in performing the activities essential for daily living.

EXERCISE IV. Flexion of forearm and arm of the affected side.

Purpose: To combine these flexion movements so that the patient may use the hand in daily activities, such as holding paper down while writing.

Position: Sitting in a chair in front of a table.

Instructions: The patient flexes the forearm to table level and then flexes the arm so that the forearm rests on the table. These movements must be performed without elevating the shoulder or abducting the arm.

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Repeat 5 times on the hour.

The habit of keeping the hand in the lap on all occasions is not conducive for reeducation. It must be placed in the position for finger action.

The WRIST, if not flexed, needs no special training. There are very few activities we cannot perform even with a fused wrist. We have increased the functional use of the hand in several young patients with extreme flexion of the wrist by fusing the wrist joint. A cock-up splint should be used if there is extreme flexion of wrist and this should be combined with a "pancake" splint if the fingers are tightly flexed.

The FINGERS of the spastic hemiplegic patient are practically impossible to reeducate for any useful purpose. If adequate function is attained, it will take years of effort by the patient. In the aged, with cardiovascular disease, it is not often worth the effort. We should not, however, have the patient give up hope of ever using the fingers. He must be made to understand that movements of the fingers depend upon the proper functioning of the shoulder, elbow and hand and placing the hand in positions for purposeful movements. The following exercises for the fingers can be used for the purposes indicated.

EXERCISE V. Extension of fingers and thumb.

Purpose: To prevent fingers contractures by extension of fingers and thumb.

Position: Sitting on a chair.

Instructions: With the fingers of the unaffected hand, extend each finger and the thumb of the affected hand.

Repeat 5 times on the hour.

EXERCISE VI. Extension of fingers and thumb.

Purpose: As in Exercise V.

Position: Sitting in a chair with hand resting on table in pronation and fingers extended as far as possible.

Instructions: Press backward and downward on the surface of the hand so that the palm of the hand is in contact with the table.

Repeat 5 times on the hour.

EXERCISE VII. Extension and flexion of fingers and thumb.

Purpose: To produce passive movements of extensors and active movements of flexors.

Position: As in Exercise VI. with a pencil resting on the table under the palm of the hand.

Instructions: Press backward and downward on the dorsal surface of the hand so that palm of hand is in contact with the table. Release pressure, flex the fingers and pick up the pencil.

Repeat 5 times on the hour.

SPEECH. When the hemiplegia affects the dominant hand the patient will usually have a sensory and motor aphasia. There is nothing so frustrating as being unable to express one's self. The type and extent of the speech disability should be evaluated and the proper treatment instituted by a speech pathologist.

GADGETS. The objectives of a rehabilitation program are to teach the patient to perform the activities of daily living. Complete independence may be impossible without the aid of special equipment. It is difficult to cut meat with one hand. The hemiplegic and arm amputee find the combination knife and a fork a useful gadget in performing this activity.[1] A special hand brush with two suction cups makes it possible to affix the brush on the mirror or wall for one-hand cleaning.[2]

CONCLUSIONS. The rehabilitation of the hemiplegic patient should be started as soon as definitive care is no longer required. The objectives of the program are to begin ambulation, with the aid of a short-leg brace if necessary; to teach the patient to perform self-care activities with the unaffected arm; to treat the affected arm in order to reeducate the muscles and prevent deformities and to give speech treatments if aphasia is present.

[1] Amsterdam Brothers, 59th Street, N. Y. C.

[2] Madison Artificial Arm Co., 271 E. Town Street, Columbus, Ohio.

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SIGNIFICANCE OF GASTRIC ULCER AND CANCER OF THE STOMACH*

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Summary and Conclusions

GASTRIC ULCER is difficult to differentiate from cancer of the stomach in a high percentage of cases. At least 10% of lesions appearing in all respects as benign ulcer, will prove to be cancer under the microscope.

Gastric ulcer as a rule appears later in life than does duodenal ulcer, and is much less common. Symptoms of these two entirely different lesions are much alike. Patients with digestive disturbances suggesting ulcer should be thoroughly investigated immediately and a diagnosis established, if possible.

Palliative treatment of duodenal ulcer will be effectual in about 80% of the patients. Such treatment will also ameliorate the symptoms of a gastric ulceration, even if it is malignant, in most cases. Permanent relief by conservative measures in benign gastric ulcer may be obtained in about 25% of the cases.

Radical surgical extirpation of gastric ulcer by partial gastrectomy will be curative in nearly all cases of this lesion if benign. If the ulcer proves to be cancer, the patient's opportunity for cure is at least twice as great as it is in clinical cancer of the stomach.

Patients with gastric ulceration should be closely observed in all instances. Young individuals with small ulcers may be treated conservatively and closely followed with safety. Patients of middle-age or beyond, should usually be subjected to early surgery without a prolonged period of treatment and observation.

* * *

Cancer of the stomach heads the numerical list as the cause of death from cancer in any form, among the people of this nation. Vital statistics are somewhat inaccurate, due to the lack of universal post-mortem examinations. Conservative estimates of the deaths from stomach cancer run between thirty and forty thousand per year. Rarely do physicians stop to compare such figures with the lower incidence of deaths from highway accidents and, at this writing, deaths of American soldiers on the battlefield. Certainly the laity have no conception of the frequency of this insidious and fatal malady.

As yet, we do not know the cause of cancer, and at this time we have only surgical extirpation to offer for the cure of cancer of the stomach. Since successful outcome is based primarily on early diagnosis and wide excision, it is my purpose to emphasize some of the important factors that may be used to improve our present results in the treatment of this disease.

A survey of a recent one hundred consecutive patients admitted to the Massachusetts General Hospital with cancer of the stomach, reveals that one-half of them arrived too late for any surgical aid. Of those who could still be offered treatment, with the hope of eliminating their lesion, only 22 were free of disease at the end of five years. Including operative mortality, only 7 of the original 100 patients were cured. This net salvage is only slightly better than it was a quarter of a century ago. It is true that more months of life is now offered than formerly to those who succumb within the five-year period. This is brought about by doubling the number of patients operated on, and by halving the operative mortality. It is disappointing, however, to find that the actual cure-rate has not improved to any marked degree during this period of observation.

Since the title of this discourse may be somewhat confusing, it is pertinent that we clarify the situation now. There have been exponents of the theory that cancer may develop from chronic benign ulceration of the stomach. Future investigators seem to doubt this change from chronic inflammation to neoplasm. Mallory feels that the initial lesion is either one or the other, and that instead of the benign ulcer becoming malignant, it is more likely that cancerous ulceration becomes secondarily inflamed by the gastric juices. This accounts for the amelioration of symptoms by bland diet and alkalies often observed in patients with early cancer of the stomach. The original concept appeared logical, and easy to accept on the basis that some visible

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carcinomas were produced by irritants that later became known as carcinogenic substances. If, however, this applied to gastric ulcer, it is apparent that more of these lesions would have become recognized as pre-malignant. This has not been the case, and it appears that we must accept the fact that ulcerations of the stomach are either benign and remain so, or are malignant and mimic the former, as secondary inflammatory reactions are super-imposed. This thesis is substantiated by the fact that cancer of the stomach has never been produced experimentally.

Impressed by the observations on a few specific patients who came to our attention several years ago, Welch and I reviewed the experience at the Massachusetts General Hospital for the decade prior to 1939. In this group of patients, we found that 14 per cent of those operated on for benign gastric ulcer proved to have cancer of the stomach. When we presented this material, there was a general reaction that it must be erroneous. Gastroenterologists of great experience were inclined to doubt these figures. After review of large groups of similar cases treated elsewhere, there was complete confirmation of our findings, and in some instances, there has been a change in attitude regarding the treatment of gastric ulcer that is even more radical than our own. Recent studies of our own, and many others, reveal that the error in diagnosis is somewhat stabilized in the neighborhood of 10%. There has been some improvement in the diagnostic methods of the Roentgenologist, the Endoscopist, and the Cytologist. It remains, however, the province of the Pathologist to confirm the diagnosis in a high percentage of cases.

We have found that the hydrochloric acid level is just as high in a borderline case of malignant ulcer, as it is in benign ulcer. Achlorhydria, however, remains an excellent diagnostic point in favor of cancer. Pain, indigestion, gas, nausea, and even anorexia, may be temporarily relieved by bland food and alkalies in some malignant ulcerations of the stomach. The size of the ulcer is of some importance, although we have seen malignancy in a few ulcers under one centimeter in diameter, and benign lesions, thought to be inoperable cancer, as large as the palm of the hand. Most of the malignant ulcers, however, were over two centimeters in diameter. The location of the lesion appeared to be of some importance in the earlier series. Those of the prepyloric region, and those of the fundus, giving the highest ratio of malignancy. With increased effort and acumen on the part of the Roentgenologist and the Endoscopist, these factors have become less important. Since at least half of all ulcers of the stomach occur on the lesser curvature, it is in this region that we find our greatest incidence of diagnostic error.

The age of the patient, and the duration of digestive symptoms probably give us our best clinical aids in the differential diagnosis of ulcerative lesions of the stomach. Our studies show that the average age of the gastric ulcer patient that we see is about 50. One must admit that any lesion appearing in a patient of this age must be proved benign. A better attitude is to assume that it is malignant until proven otherwise. The duration of symptoms in these patients is of apparent importance. Those with symptoms of five or more years proved to have benign ulcer in about 80% of the cases, while on the other hand, in those with symptoms of one year or less, approximately 80% of the lesions proved to be malignant.

We have known for years that small, localized cancers of the stomach were more amenable to cure. It is of interest that patients operated on under the diagnosis of benign ulcer but proved by the Pathologist to have cancer, have double the opportunity for cure as do those whose clinical diagnosis is that of cancer. This alone presents the best argument for the radical treatment of gastric ulcer. It is, in fact, a conservative attitude, when one considers the present low mortality in gastric resection. There is considerable reliable evidence that gastric ulcer responds less well than duodenal ulcer to palliative treatment.

We are in the position of making these factors clear to our profession, and to foster all educational methods along these lines, to the public. How can the physician justify his present method of practice? His patient of middle-age appeals to him for advice concerning recent symptoms of indigestion. The usual story is that of more or less sudden onset of epigastric distress attributed to a particular and easily-recalled indiscretion in diet that does not respond to the drug-store remedies so freely advertised on radio and in newspapers. The almost invariable assertion that before this episode, he could eat anything he chose, and abuse his stomach in a merciless manner, without ill-effect, should make us wary. The chances are three to one that this will be a male patient and this sex is not as prone to get medical advice as is the female. This also should put us on our guard. Because we know that our patient expects us to relieve him by a simple and non-troublesome formula, we are inclined to prescribe a bland diet, add alkalies, and probably belladonna, and send him on his way. If we suggest immediate x-ray examination, he is apt to balk, and may actually refuse to have it done. This combination of human and understandable reactions, has been responsible for the lost opportunity in countless lives.

If we are going to give our patients an even break, we must rule out gastric ulcer as a cause of his symptoms. This can only be done by adequate

studies including a careful x-ray examination carried out by a competent radiologist. Having found a gastric ulceration, one must then act in a logical manner. The most important feature is to keep such an individual under close supervision. In many, and perhaps the majority of these cases, operation should be advised as soon as adequate facilities and competent surgeons are available.

Unfortunately, however, the usual practice is to prescribe a diet, rest, alkalies, plus the elimination of alcohol, caffeine, and nicotine. This will ameliorate the symptoms and the patient may actually lose all discomfort and insist that he is cured. Follow-up x-ray examinations may reveal an improvement in the appearance of the ulcer. It may actually fail to be visualized after a month of treatment. Fortunately, many of these patients remain well, and some of them have long respites between episodes of activity. These are the ones who do have benign ulcer and nothing else. The unfortunate side of this picture is that in many instances we have a temporary improvement in symptoms, and in x-ray appearance only to wake up to the fact, three to six months later, that we have robbed this individual of his chance for life. He now has well-advanced cancer that reduces his opportunity for cure to a low degree.

Much of our confusion in this problem is understandable. Duodenal ulcer is about ten times as common as gastric ulcer. We know that duodenal ulcer never is malignant, and we also know that most people do very well on conservative treatment for this lesion. We must remember, however, that doudenal ulcer nearly always starts early in adult life. It can begin after mid-life, but this is unusual. It is true that occasionally gastric ulcer may be observed in the young, but this is also uncommon. Bearing in mind these differences in the age of the patients appearing for these two very distinct entities, we can eliminate many of the tragic errors in our management of such cases. The tendency to consider the symptoms alone, leads us astray, since both of these lesions do produce epigastric pain, indigestion, sour eructations, etc., in much the same manner. The differential diagnosis is seldom made with any degree of accuracy without the aid of the Roentgenologist.

Is the radical extirpation of gastric ulcer the only means we have of improving our results in the treatment of cancer of the stomach? This question has caused many of us great concern. It does seem that this disease can develop with more insidiousness than cancer in many other parts of the body. At times I have been amazed to find that patients and their physicians have passed over what seemed to them unimportant and trivial warnings, that in retrospect seemed so obvious. On the other hand, there have been occasions when a patient with hopeless carcinoma of the stomach, would admit to no signs or symptoms that could have led to treatment at a curative stage.

It has been suggested that every person beyond mid-life should have a periodic health examination, and this is carried out by a sizable segment of the population. It is interesting that many of these individuals actually have certain disturbing signs or symptoms that prompt them to go for a check-up. It is true that in the routine examination of a large number of people, presumably well, unsuspected lesions are discovered in a small but definite percentage of them. This is more impressive if the survey is made on people beyond mid-life. It is fair to say that the incidence of cancer of the stomach, found on such examinations, is far less than cancer elsewhere in the body. Radiologic examinations of the stomach in large groups of symptomless patients will yield such a low incidence of cancer of the stomach as to make such a routine study impractical. A higher percentage of lesions will be found when a selected group is accepted for study. This is particularly true in those patients who have achlorhydria. It would seem then, at this time, that we have no adequate method of diagnosing stomach cancer before symptoms develop. We must, therefore, pay strict attention to symptoms in their early stages and we must educate the people to have these early symptoms investigated.

Although it was not my intent to take into consideration, at this time, the extent and type of surgery done for cancer of the stomach, I feel that this phase of the subject should be mentioned. There have been some proponents of total instead of sub-total gastrectomy as a routine procedure when cancer of the stomach is found. Certainly, most of us would agree that when the surgeon feels that he can remove all visible disease only by total gastrectomy, he should do it. When we reserve total gastrectomy for these advanced lesions, the operative mortality is high. If we routinely submit all patients with cancer of the stomach to total gastrectomy, the mortality will naturally be lower because we have included many good-risk patients in the group. We must consider two factors here; one is, do we increase the number of cured patients enough to balance the added mortality? The second phase of the subject deals with the morbidity which is gravely increased in the total over the sub-total group.

At this time, I am sure that we should do as radical an operation as can be done without, first, jeopardizing the patient's chance for cure, and secondly, without making him an invalid for life. The majority of cases of cancer of the stomach that are operable at all can be given a radical subtotal resection with a good life-expectancy, and a

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REPLACEMENT OF THE FEMORAL HEAD BY A PROSTHESIS*

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THERE ARE many refractory lesions of the hip in which both conservative and operative treatment fails to give consistently satisfactory results. Orthopedic surgeons have shown a certain complacency in accepting these results and have not made sufficient effort to investigate newer possibilities of treatment. Some of the current procedures have continued to be accepted simply because they have been given much publicity. Any attempt to revolutionize treatment has often met with opposition, due in part to personal prejudice and in part to the lack of knowledge and understanding of the newer technique.

At the present time attempts are being made to replace the diseased or mechanically imperfect upper femoral extremity by a prosthesis, and the results are extremely satisfactory. It is not a new development, for such substitutions have been attempted for many years. Delbet made the first systematic attempts at replacement in 1919, among which was included the substitution of an upper extremity of the humerus by a prosthesis of reinforced rubber. However, there has been considerable progress made in prosthetic work because of improved surgical technique, the use of antibiotics, and the development of materials that are well tolerated by body tissues.

There are now several different replacement methods in use. For the most part they are untried methods. They are also methods that entail extensive surgical trauma. Since many patients suffering from hip lesions are elderly and should not be subjected to prolonged traumatic surgery, it is unlikely that some of these procedures will come to be accepted.

A simple and practical replacement method has been developed through the efforts of Robert and Jean Judet. The technique is not difficult when it is understood. It involves little trauma and can be carried out in a short time. The method is rapidly being accepted abroad and I feel certain that its adoption in this country is inevitable.

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The procedure consists of the removal of the femoral head, deepening of the acetabulum when necessary, and the substitution of a plastic head. The prosthesis is fitted very carefully over the femoral neck, and it is provided with a tail that passes through the neck and makes its exit on the outer side of the femur just below the trochanter. It is necessary to vary the technique somewhat in individual cases, depending upon the amount of neck remaining, and whether transplantation of the greater trochanter downward on the femur, or simple abduction of the process at its superior attachment, is required. All arthritic spurs are removed.

The Judet brothers have used this method in several hundred cases with excellent results. In the past year I have used the procedure in thirty-six cases and the results have been most satisfactory. The most striking feature has been the absence of pain after the operation. I shall show you a moving picture of some of my cases as well as of the operative technique.

The method has a wide field of application. It is particularly applicable to *osteo-arthritis* of the hip, the progressive disabling lesion that is so common. The only method that has been considered efficacious in treating this lesion up to the present time is arthrodesis. It is only recently that the technique of arthrodesis has been perfected so that consistently good results are ensured. Stiffening the hip, however, has many drawbacks. Stability is obtained at the sacrifice of motion. Arthodesis is contraindicated when the lesion is bilateral, or likely to become bilateral, or when the lumbar spine is stiff or arthritic. The procedure calls for a prolonged period of postoperative immobilization, which is not well tolerated by the elderly patient.

Many efforts have been made to relieve the painful arthritic hip by other procedures. Excision of the femoral head and neck and conditioning of the acetabulum is a method in use, but it may result in an unstable hip. Osteotomies of various types have afforded some relief from pain, but they have a limited application, necessitate an extended period of immobilization during which the knee may become stiff, and good functional results are not ensured. Arthroplasty has not proved successful in

creating a painless hip joint with good function. The metallic cup method presents many drawbacks including the possibility of absorption of the femoral head and neck.

Another indication for the Judet method is presented by cases of *arthritis secondary to juvenile lesions,* such as Perthes' disease and epiphyseal slipping. Faulty mechanics of the hip joint due to the misshapen head and neck or shallow acetabulum lead to a painful joint with limited motion in later life.

The *ankylosed* hip lends itself to the method, whether the lesion is unilateral or bilateral. Arthroplasty in which a free fascial transplant is used has not proved successful in these cases and I have given up the method. The metallic cup has not proved itself.

The *intracapsular fracture of the neck of the femur* that fails to unite or is followed by avascular necrosis of the femoral head presents another indication. The fact that there are so many operative procedures recommended for the treatment of this lesion is proof that none is entirely satisfactory. The Whitman's reconstruction operation, bone-grafting and subtrochanteric osteotomy have afforded some satisfactory results, but all three methods have disadvantgaes. The joint created by the Whitman method has motion, but it is limited and painful; with bone-grafting there is the danger of non-union; and with subtrochanteric osteotomy also, union may fail to occur.

The replacement method has a certain application in *fresh intracapsular* fractures of the neck of the femur. There is plenty of evidence that nailing often produces a poor result. In a late report by King of Australia, it is pointed out that most surgeons are obtaining union in only approximately 25 per cent of the cases treated by nailing, and that avascular necrosis of the head is developing in another 25 per cent. In these cases a progressive arthritic process develops, causing increasing limp and pain and even total disability.

As a method of treatment of all these lesions, the Judet procedure is superior to any in use. In my series of cases there were lesions of all types, including ten fresh fractures of the neck of the femur of the subcapital variety. It is my conviction that the replacement method is here to stay. Whether the technique will be improved or even changed, only time will tell, but the prosthetic method will live.

* * *

This talk was followed by a moving picture demonstration of the operative technique of the Judet method and illustrative cases.

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THE PALPABLE LIVER. ITS RELATION TO LIVER SIZE AND MORTALITY IN LAENNEC'S CIRRHOSIS*

ROBERT V. LEWIS, M.D.

The Author. *Robert V. Lewis, M.D., of Providence, R. I., Medical Service Staff, Rhode Island Hospital.*

CLINICALLY, the most impressive sign of liver disease, except jaundice, is an enlarged palpable liver. Ultimate diagnosis of Laennec's cirrhosis depends on biochemical tests of liver function and liver biopsy or autopsy. Clinically, however, liver size is of importance for prognosis and treatment. This paper attempts to relate actual liver size (as measured by weight) to liver size as determined at the bedside by palpation. Liver size is a clue to the pathological stage of the disease. Treatment may be evaluated and prognosis given from this single clinical determination. The pathogenesis of Laennec's cirrhosis as described by Moschcowitz[1] shows the first stage to be that of fatty infiltration. Fatty livers are often large and palpable. It is in this fatty, enlarged, palpable stage that best results of therapy are obtained. Buck[3] and others have shown this. The terminal stage in the pathologic process is often severe atrophy, replacement with connective tissue, shrinkage, and a presumably non-palpable organ.

We attempted in this paper to correlate the size of the organ as felt at the bedside with the weight of the organ as reported by post-mortem examination, and further to see if an enlarged palpable liver did carry a better prognosis than a shrunken, non-palpable liver.

Methods

The liver weights of all cases of Laennec's cirrhosis in the Rhode Island Hospital from 1929 through 1941 and in the Institute of Pathology within the Rhode Island Hospital from 1946 through 1948 were correlated with the pre-mortal clinical records of the patients.

Results

1. Regardless of the patient's height, weight, or sex no liver which weighed less than 1500 grams was felt on physical examination. (Table 2)

2. Three of four cases with livers in excess of 3000 grams were palpable and reported as four finger breadths below the costal margin. (Table 1)

3. Between 1500-3000 grams there is a chance probability that the organ will be palpable. (Table 2)

4. A non-palpable liver was reported in seventy percent of the seventy-two fatal cases and a palpable liver in only thirty percent.

5. Only two percent of the deaths occurred in patients with markedly enlarged livers.

Discussion

A statement that can be made from this study with a high degree of certainty is that a palpable liver, regardless of all other factors, in cirrhosis of the liver weighs in excess of 1500 grams. The normal range of liver weights in the adult is between 1200-1800 grams.[4] Therefore, if a liver be palpable in a case of Laennec's cirrhosis it is evidence that a generalized severe atrophic stage has not occurred. An estimate of liver size, enlargement or atrophy, can be made in Laennec's cirrhosis by physical palpation of the abdomen in many cases. The percentage of non-palpable livers based on this autopsied series is much larger than in series of cases based on hospital admissions such as Ratnoff & Patek[2] since the latter include many viable cases and an autopsy series only non-viable cases. A palpable liver is reported by Ratnoff & Patek as occurring in approximately seventy-five percent of hospital cases of Laennec's cirrhosis. This finding is easily confirmed. Since only thirty percent of the livers in the present series were palpable we interpret it to mean that the stage of marked scarring and atrophy is a terminal stage with a higher mortality. From studies of the natural history of the pathology this would appear reasonable. Many deaths occur, however, during the stage of an enlarged liver. Esophageal varices and bleeding from the same may cause death before liver failure has occurred or the liver has become nonpalpable. Deaths secondary to the liver disease can and do occur with an enlarged liver.

A palpable liver because of its increased size and probable increased fat content should give much

*Paper prepared while Doctor Lewis was a Haffenreffer Fellow in Internal Medicine, Rhode Island Hospital, 1947-1948.

better therapeutic results than the atrophic non-palpable liver.

A non-palpable liver because it probably represents a further stage of pathology should give poorer therapeutic response and carry a worse prognosis.

Conclusions

1. A palpable liver weighs more than 1500 grams. Probability 1.0 (100%).

2. A non-palpable liver weighs less than 3000 grams. Probability 1.0 (100%).

3. The probability of palpating a liver weighing between 1500-3000 grams is .5 (50%).

4. Death occurred in seventy percent of patients with non-palpable livers compared to only thirty percent with palpable livers.

5. a) Thirty-three percent of the livers were shrunken and weighed less than 1000 grams.

b) Sixty-five percent of the livers weighed between 1500-3000 grams.

c) Only two percent of the livers weighed in excess of 3500 grams.

TABLE 1

Post-mortem Liver Weights	# Not Palpable	# 1-3 Fingerbreadths Palpable	# 4 or more Fingerbreadths Palpable	Total
5000				
4500			1	1
4000			1	1
3500			–	–
3000	1		1	2
2500	2	1	–	3
2000	8	5	3	16
1500	14	4	6	24
1000	18			18
500	7			7
TOTAL	50	10	12	72

Range: 720-4800 grams
Median: 1750

TABLE 2

Liver Weight Grams	Number Palp.	Number Non-palp.	Percent Palp.	Percent Non-palp.
0-1499	0	25	0%	100%
1500-2999	18	22	45%	55%
3000-	3	1	75%	25%

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SIGNIFICANCE OF GASTRIC ULCER AND CANCER OF THE STOMACH

concluded from page 427

gastro-intestinal tract that functions well enough for him to lead a normal life. If the lesion has spread to the lymph nodes of the celiac axis at the time of surgery, few of them could be cured of their disease, even if a total gastrectomy were performed. It requires many months, and sometimes years, for most patients to learn to live comfortably without any stomach at all. It is justifiable, however, to include all accessible lymph node areas in the bloc dissection for cancer or suspected cancer of the stomach. It is also imperative to transect the stomach so far above the lesion itself, that there can be no doubt concerning removal of the entire local process.

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MEANS FOR DIVORCE

DR. J. HOWARD MEANS has resigned from the American Medical Association. Sorrowfully, we feel that this is much in keeping with a modern American trend which distresses many old-fashioned people. We refer to the tremendous increase in divorce.

The ideal spouse must be a rare individual and to find two of them in any given marital combination, while mathematically possible, is sociologically improbable. Yet, until the Hollywood era a surprising number of wedded couples evidently considered the pros and cons and found the pros predominated.

That simple arithmetic is little used now and Dr. Means is too impatient to apply it to the A. M. A. rating. He believes that governmental insurance is a panacea for the ills besetting the medical care of the country which is in such a parlous state that this decidedly drastic treatment is necessary. Here is a family rift that has caused some hot words to be exchanged, Dr. Means is miffed about it and, as frequently happens in this mid-twentieth century, he has got a divorce.

The A. M. A. is composed of the rank and file of the best doctors in the country. In the most democratic of ways they elect their delegates and the House of Delegates absolutely dictates the policies. So there is little evidence that most of the doctors of the country feel as Dr. Means does and show that the people of the country are with the doctors. Dr. Means in the *Atlantic Monthly* and the proceedings at Washington would seem to Bernard DeVoto in *Harpers* and Oscar Ewing lavishly spending the people's money to present the same side of the question and the intense activities of Dr. Frothingham's organization have given the fullest publicity to the arguments.

But even if we should grant that Dr. Means was on the right side of this quarrel, which we don't, is he reasonable to get a divorce?

Consider some of the good qualities which Dr. Means must have recognized in his years of union with the A. M. A. Throughout its existence it has been on the side of the best in medicine and against quackery and fads. Its list of publications led by the J. A. M. A., which has great claims to being the outstanding medical periodical, has been a most potent force in education. It has supported and taken an active part in the campaigns to improve the medical schools and hospitals of the country. We will mention only one of its numerous councils and committees, which is typical of the rest.

The Council on Pharmacy and Chemistry has probably been the strongest force in the country, if not the world, for good therapeutics. The late Walter Walker Palmer, Professor of Medicine at Physicians and Surgeons in New York, was, we are sure, a friend of and admired by Dr. Means. For thirty years he was an earnest member of this Council. Such devoted cooperation by many fine doctors has made the A. M. A. a great force for good.

We know from the stories in the news that many divorcees find their second tries no better than their first. We know that if we have government insurance it will be run by politicians. Dr. Means will be put on an important committee and the honeymoon will be a pleasant one. But politicians as is being clearly shown in Massachusetts are most of them very poor mates for nice people. We think our hero will find that family life will not be as pleasant as the years with what seems to him now the dowdy old American Medical Association.

LAY ADVISORS

The action of the board of trustees of the American Medical Association in deciding to appoint a committee of prominent laymen, representing industry, labor, agriculture, education, the bar and the clergy, to advise it in matters of medical care and "to present the viewpoint of the general public", is a step in the right direction.

The busy physician has added greatly to his work in the past decade as the result of social and economic changes in the American system. The task of keeping pace with the many and varied programs affecting the practice of medicine over and above scientific work imposes too great a strain upon the doctor. Medical organization has been greatly augmented, and now more than ever before there is need to call upon outstanding interested citizens to help inform the public on what medicine is doing, and can do.

In Rhode Island we have utilized many fine laymen in recent years to aid us in establishing our surgical insurance program, to assist in air and water pollution campaigns, and more recently to study the serious problem of rising hospital costs. We have gained much from such lay help, and we feel certain that the American Medical Association officers will profit equally from the efforts of its national lay advisory group.

DIRECT ENROLLMENT

This month Physicians Service makes another long step forward in its program of prepaid insurance to extend surgical-medical care to the people of Rhode Island with a direct enrollment campaign. Under this arrangement employed groups of less than ten, and individuals who may have retired from employment, will be able to purchase contracts providing for prepaid surgical care as well as medical vists for non-surgical services in the hospital.

Thus in little more than a year and a half the physicians of Rhode Island have opened up their program to everyone in the State, regardless of age or employment. To our knowledge no other voluntary prepaid plan in the country offers such a liberal contract as presented to the people of this State by the Rhode Island Medical Society. The response to the appeal for subscribers should certainly be overwhelming.

The hundreds of letters that have flowed to the officers of Physicians Service in the past year in praise of the contribution of the physicians of this area in making such a liberal program possible, and for underwriting the total cost of the operation for persons within eligible income groups has been most heartening at a time when news writers, politicians, and social planners try to minimize the efforts of the physicians of this country.

The action of Physicians Service, and of Blue Cross, in this State in making their contracts available to everyone is solid repudiation of such schemes as that now proposed by Oscar Ewing whereby the federal government, through the social security program, would pay for hospital costs for persons over the age of 65 years. Once again we prove that the voluntary way is not only the American Way, but the better way.

TELECASTING MEDICINE

The medical society of the County of New York has come up with an interesting proposal that it will make to the large county medical societies of the country in the coming weeks relative to medical television programs. Located in the center of the television broadcasting area, the New York society sought ways in which to make possible an outstanding show. Their solution is worthy of study.

A national foundation of county medical societies has been created with a nonprofit charter, and this foundation will receive any income earned by the new program. Sponsorship — that most essential item — will be restricted to so called "institutional" advertising, with no one pharmaceutical or other related medical commercial organization permitted to buy the program. A trade association or group of pharmaceutical manufacturers might be suitable, however.

A board of directors selected from nominees made by the county societies participating in the work of the foundation will decide on the programs, and allocate funds received. Outstanding physicians would be brought to New York from various parts of the country to participate on the weekly shows, but every opportunity will be taken upon the television to stress the role of the local home town doctor. It would be explained that the information being given on the program is known in the home community and that while the best authorities discuss it (on the telecast) they are talking of the "hard core" of proven medical knowledge which is available to physicians everywhere.

continued on next page

Local medical society participation would be included through station "breaks" at which time in each community sponsoring the telecast an announcer would point out the cooperation of the local county medical group in the program.

Health is a vital subject that certainly interests everyone. Public education on health care, however, is still far behind in the matter of preventive care against disease, in spite of the progress that has been made in the past decade. Doctors by nature and training can hardly be expected to compete with the Hop-A-Long Cassidys and Bob Hopes of the entertainment world who dominate the radio and television field. The task of presenting a television program that will reach the masses, and carry the message of sound medical information, is indeed a challenge.

We commend the largest county medical society in America for its leadership. We hope that the plan will materialize, and that medical television may be utilized effectively in bringing better health knowledge to people everywhere.

PAWTUCKET MEDICAL ASSOCIATION

The annual golf tournament and dinner of the Pawtucket Medical Association was held on June 27, 1951, at the Pawtucket Golf Club. Nineteen members attended.

Prizes for best scores were given to Dr. Francis Hanley, Dr. Adrien Tetreault, and Dr. Harold Woodcome.

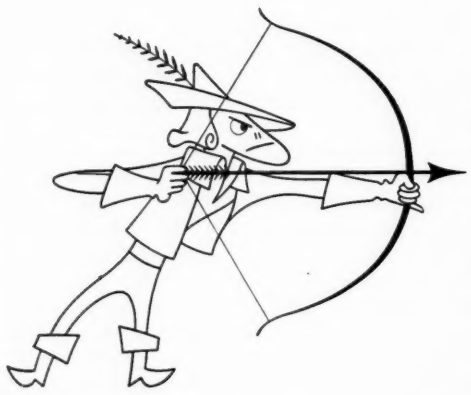
The business meeting was called to order by the President, Dr. Kieran W. Hennessey, at 8:15 p.m. The reading of the minutes of the previous meeting was dispensed with by consent of the membership present. Dr. Hennessey commended the Committee, Dr. F. Hanley, Dr. Tetreault, and Dr. Woodcome, for arranging the program.

An application for admission to the Association by Dr. Edward J. Butler was introduced. This was referred to the Standing Committee.

The meeting was then turned over to Dr. Hanley who observed the passing of one of our members, Dr. Evariste A. Cormier.

The meeting adjourned at 9 p.m.

Respectfully submitted,
HRAD H. ZOLMIAN, M.D., *Secretary*



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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

SURGICAL FEES

— *Presidential Address of William P. Davis,* M.D. *at the Second Annual Meeting, Providence Surgical Society, April 30, 1951*

On November 28, 1949, a group of Providence surgeons met at the Hope Club in Providence, for the purpose of transacting such business as was necessary for the incorporation of a new organization, the Providence Surgical Society, in the State of Rhode Island.

Proper papers were filed with the Secretary of State of the State of Rhode Island on the next day, November 29, 1949, and the Providence Surgical Society, Incorporated, came into existence.

The First Annual Meeting of the Society was held at the Hope Club April 27, 1950, at which time election of new members added to the eleven members of the Founder Group, 13 Senior members, 28 Active members and 1 Honorary member, making a total membership of 53.

We were honored at that first meeting by Dr. Arthur W. Allen of Boston, whose subject for discussion was *Cancer of the Colon.*

The second meeting was held at the Hope Club on November 9, 1950. Dr. Orland Smith was the speaker of the evening, reporting for his Committee on the Fee Schedule of the R. I. Medical Physicians Service.

The third meeting, held at the Agawam Hunt Club, January 11, 1951, gave the members of the Society opportunity for the presentation and discussion of interesting cases.

The meetings of the Society have been well attended for its first year. Its program has been varied and *indeed* the meetings have been "dedicated to the cultivation and improvement of the Science and Art of Surgery and the consideration of such other matters as may properly come within its sphere."

And high on the list of these "such other matters as may properly come within its sphere" is the question of Fee Schedule.

We were born into the medical profession, our veins filled to the brim with charitable blood, our spleens lacking the stroma necessary for business acuity, and with the God-given desire to ruin our social security by keeping our patients well. We have been classified as mercenary in our attempts to discourage the Fake Healer, or Medicine Man. What business we have is threatened to be absorbed by the State.

Let us return to the year of 1639 when an act was passed of "Legal Censure and Restraint against the Medical Profession in the Colonies." In the preamble, and I quote, "The excessive and immoderate prices exacted by diverse avaricious and gripeing practitioners in physick and chicurgery hath caused several hard-hearted masters, swayed by profitable rather than charitable respects to expose a sick servant to the hazard of recovery." end of quote. It continued that the fee charged was often more than the cost of the servant, and that poor people "give themselves over to a lingering disease." The guilty physician was subject to arrest.

In 1736, (40 years before the Declaration of Independence,) a Fee Bill was established by law in the colony of Virginia. "Whereas the Practice of physic in this colony is most taken up and followed by surgeons, apothecaries or such as have only served apprenticeship in these trades, who often prove very unskillful in the art of a physician, and yet do demand excessive fees and exact unreasonable prices, etc., Be it therefore enacted: No person shall recover for visiting any sick person more than the rates hereafter mentioned." Thus we find that in the early history of the colonies the State had established control of the physician in matter of fees.

There were numerous fee schedules and tables in those early days formulated by the various medical societies — independent of State pressure, as far as I could discern. There was considerable variation in charges according to locality. In all, schedules were based on the minimum charge with careful wording as to further reductions as the necessity for such reduction arose, thus assuring free services to the needy and the deserving. Apparently a large number of the schedules were formulated for the purpose of maintaining standards and the prevention of undercutting on the part of the members.

The Providence Medical Association was incorporated June 15, 1887. Seven years later, March 1894, an extensive fee table was adopted. Reading from the By-laws, Article V of Fees:

Sec. 1: The Fee Table is designed as a guide to the members. As expressing the usual or minimum charges, and it is to be understood that it is unfair

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*Crawley, G. A.: *Clinical Study of Trocinate, A New Antispasmodic Drug, M. Rec. & Ann. 43:1104, 1949.*

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SURGICAL FEES

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to other members to underbid these charges. In cases of actual poverty, suitable reductions may be made, and in such case, the fees shall be left to the judgment and discretion of the members.

Sec. 2: In ordinary cases of consultation the attending physician may charge the same fee as the consultant, governed by the circumstances of the case. When a second physician is associated in conducting a case of midwifery, both shall charge the usual fee, but when the consultant makes only a consultant visit, without detention, he may charge the ordinary consultation fee.

Sec. 3: Only as otherwise arranged with the attending physician, consultants and assistants shall render their bills directly to the patient.

The By-laws of the Providence Medical Association were revised in June 1902 and in 1912 the revision of fee schedule. On May 5, 1919, the long listing of medical fees was dropped and a schedule of minimum fees was adopted. Article V of Fees was still maintained. Revision occurred again in 1921 with retention of Article V of Fees, but all listings were removed.

At the time about 1900 when this first fee schedule of the Providence Medical Association was formulated, a quart of good milk was obtainable for six cents. A whole calves' liver and the sweetbreads could be bought for thirty-five cents. A dozen of eggs cost twelve cents. A general maid in your home could be had for $2.50 per week. And yet, in those days, 1900, our fee schedule placed a minimum fee on an appendectomy from $50.00 to $500.00, radical cure of hernia, $100.00 to $500.00, nephrectomy or nephrotomy $100.00 to $500.00, stone in bladder, $50.00 to $300.00, hysterectomy $200.00 to $1000.00, amputation $50.00 to $200.00, extirpation mammary gland $50.00 to $200.00. In 1864 the Boston Medical and Surgical Journal reported a fee schedule for capital operations or operations of unusual difficulty $100.00 to $500.00 and for operations of secondary importance or difficulty from $25.00 to $100.00.

January of this year 1951, the N. E. Telephone Company spent a large sum of money in advertising the need for an increase in their rates. Meats, poultry, and fish, they stated, have increased 134% in cost since 1940. Dairy products 107%. R. I. School costs per pupil 94%. The R. I. per capita income has increased 96%. These percentages represent only the increases from 1940. Think what the percentage of increase would be from the year 1900 when hens laid eggs at 12¢ per dozen.

Section I of Article V of the By-laws of the Providence Medical Association adopted in 1894 reads, and I repeat, "The Fee Table is designed as a guide to the members, as expressing the usual or *minimum* charges." Article V of the By-laws withstood the revisions of the By-laws in 1902, 1912, 1919 and 1921.

What has happened to the medical profession in the past few years? No longer the Fee Schedule expresses the minimum charge for operative work, but, and I quote from one of our contracts, "Participating physicians have agreed with the corporation that their charges for operative procedure will not *exceed* the benefit provided in the Master Schedule." No longer the minimum, but the maximum charge has been designated and we have agreed to it. Our present fee schedules have landed at new lows in spite of the fact that the cost of our education and living expense has increased to such great heights.

In 1894 our medical society recommended to its members the *minimum* fee to be charged for the radical cure of hernia — $100 to $500 and I believe this fee did not include pre- or post-operative care. Today you are performing the same operation with better technique, and your maximum allowable fee including hospital pre- and post-operative care is $100. Bilateral, $125.00.

The *minimum* fee for a supracervical hysterectomy in 1894 was from $200 to $1000. Today the *maximum* fee in one of our schedules and probably for a total hysterectomy is $150.00, again including all hospital care.

Appendectomy: Minimum fee 1894 $50 to $500. Now, $100 maximum, all inclusive.

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Extirpation, Mammary Gland: Minimum fee 1894 $50 to $200. Now, simple $75.00. Radical $125.

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In the first place, the medical profession has never balked in giving free service to the poor and to the needy. The admissions to the RIH for years totaled close to 90% ward admissions for which no charge could be made by the visiting physician. We had assumed this attitude without complaint. There was some dissatisfaction, however, as to the responsibility for the care of the poor. The Northern Ohio Union Medical Association in 1855 credited the following paragraph to Erastus Cushing, grandfather of Harvey Cushing: "We are under no obligation to give longer credit than does the merchant, the mechanic, or member of other respected professions. It is not intended to prevent gratuitous service to the poor, still we do not believe it the duty of the physician (in a country

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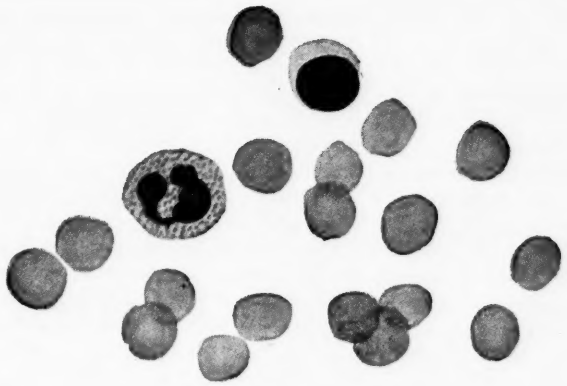

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SURGICAL FEES

continued from page 438

where ample provision is made by law for the poor), to indiscriminately give his services and medicines. With equal propriety might the merchant be requested to clothe, and the provision dealer to feed the poor, in every instance gratuitously."

Our ward patients have markedly decreased in numbers, that is true. We have been in war years, with jobs available to all. Repeating — the N. E. Telephone Company quoted the R. I. per capita income increase at 96% since 1940. The Hospital plan of the Blue Cross was organized to pay the hospital costs of the sick, but hospital costs have risen so high that Blue Cross has not kept pace. It has become an indemnity plan for both rich and poor alike.

When times are hard, the first thing a man drops is his insurance. But we are told, our medical insurance plans are paid for by the employer. When times are hard, the employer becomes eliminated, jobs are scarce, the income average drops from the 96% increase per capita, and we operate the patient again as a ward patient, for whom there can be no service charge.

Our *poor* have heretofore been cared for, often in better style than the private patient, through the generosity of the medical profession in free service and the generosity of the rapidly growing extinct group of philanthropists such as the late Senator Metcalf with his large donations of money to our hospitals.

The *wage-earner,* once taking pride in accepting the responsibility for his medical fees and for his own living expenses, both in his illness and in his health, now finds that his 96% increase in income has not solved his problem. He is forced to make cuts along the line, and in illness, his living expenses persist. The present day hospital charges are almost prohibitive in spite of Blue Cross.

Therefore, since the physician has nothing but service to sell, and can not or does not justify his charges by annual reports, his is the income which suffers, and unless we become alert to the dangers facing us, and unless organizations such as this, the Providence Surgical Society, dedicate themselves to the "considerations of such other matters as may properly come within its sphere," then may we expect to shoulder not only the responsibilities of the medical care of the patient, but in truth the financial responsibility as well.

Today our earning capacity is markedly decreased through self-imposed longer training periods and self-imposed reductions in our Fee Schedules. Our expenses have multiplied in education, living and taxes. We are still giving to charity in professional skill and finance. We have widened our field of service at our own expense.

May I leave you with the thought that the appointment of a Standing Committee in this Society seems justified in order to:

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INTERIM MEETING OF

THE RHODE ISLAND MEDICAL SOCIETY

* * *

4:00 p.m. *GENERAL ASSEMBLY*. HERMAN A. LAWSON, M.D., President, R. I. Medical Society, *presiding.*

* * *

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Director, Memorial Center for Cancer and Allied Diseases, New York City.

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RICHARD FORD, M.D.

Medical Examiner, Suffolk County (Mass.); Acting Head, Department of Legal Medicine, Harvard Medical School.

* * *

6:00-7:00 P.M. ..... Reception and cocktails

7.00 P.M. ..... Dinner

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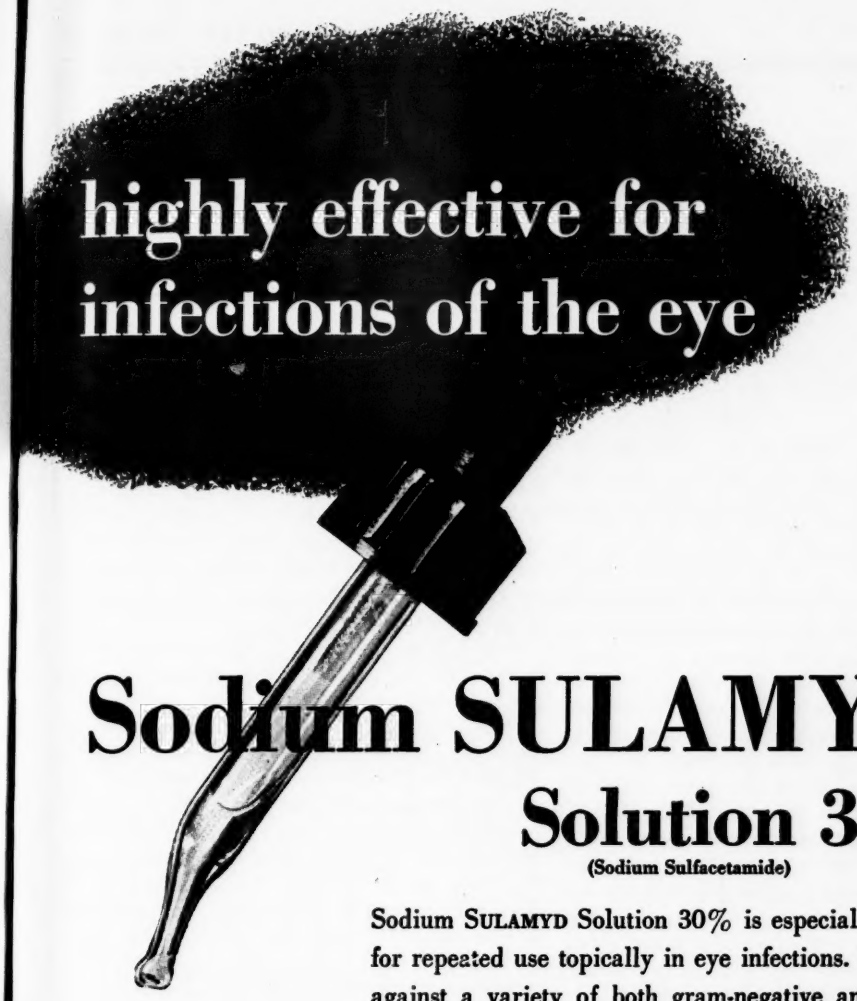

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BOOK REVIEWS

ELECTROENCEPHALOGRAPHY IN CLINICAL PRACTICE by Robert S. Schwab, M.D. W. B. Saunders Company, Philadelphia, 1951. $6.50

Books on a new and intricate specialty such as electroencephalography are apt to fall into two major categories. The first kind is addressed to others expert in the field, with a purpose of propounding a new theory, extolling a new method or asserting allegiance to one or the other side in the controversies which are so often violently present in the younger days of any new science. The reviewer then, depending upon his own orientation, is apt to greet the new work with loud cries of enthusiasm where it accords with his own stands and with equally noisy dismay where it diverges from his viewpoint.

This book, however, falls in the second category. It is addressed, not to Dr. Schwab's fellow specialists, but to those expert in other fields and to those general practitioners who would make more intelligent use of this new tool. It is to give them an understanding of the physiological basis of the phenomena we study; of the instruments and other tools necessary to record this phenomena; of the means and basis for classifying the results obtained; and above all the interpretation of these results and the use or lack of use inherent in this new method.

In these laudable aims Dr. Schwab has succeeded admirably. Particularly to be commended is his urbane and eclectic approach in the field which, as has been indicated, is all too often full of partisan fury. This is all the more commendable since Dr. Schwab is himself a pioneer in this work and therefore as entitled as anyone else to petty and parochial interpretations. Another valuable aspect of this book is that Dr. Schwab is equally well versed as a neurologist and clinician and the entire book therefore is informed with a clinical point of view which should make it refreshing reading for those for whom it is addressed. Finally, since the laboratory at Harvard and Massachusetts General Hospital has been in the forefront of electroencephalography since its inception in this country and has played a large role in all of the developments up to the present day, Dr. Schwab speaks with unimpeachable authority.

The book begins with an excellent historical summary. Historically minded and gently patriotic Rhode Island physicians may note with some pleasure references to the fact that in this country the first human EEG was performed and the first functioning EEG laboratory was set up almost simultaneously by Dr. Herbert Jasper at the Bradley Home in Riverside and by Dr. Hallowell Davis at Harvard. Dr. Schwab also mentions that the first serious work in electroencephlaography in children was begun by Dr. Donald B. Lindsley, again at the Bradley Home.

This portion is followed by a brief and succinct discussion of the neurophysiological basis for the electroencephalogram. Then comes a description of the normal and abnormal EEG, with due regard to the differences imposed by age and other physiological phenomena. The waves are described both by frequency and the names given to them. There is a clear and informative table of normal and abnormal findings. The classification used by Dr. Schwab is his own, but very understandable, and approximately midway between the two opposing classifications devised on the one hand by Dr. Herbert Jasper—now with the famous neurosurgeon Penfield at McGill—and by Dr. Frederic Gibbs, formerly of Harvard, the two great protagonists in this field.

Dr. Schwab next takes up the technique of electroencephalography describing the types of machines available and proper, the room to be used, the kinds of electrodes and their placement and the special electrodes recently devised. He explains

continued on page 446

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Under the Auspices of the

RHODE ISLAND MEDICAL SOCIETY

WEDNESDAY, OCTOBER 17, 1951

At the U. S. VETERANS ADMINISTRATION HOSPITAL, Providence, Rhode Island

Morning Session

Presiding: George W. Waterman, M.D.
Chairman, Cancer Committee, R. I. Medical Society

* * *

11 a.m. CHEMOTHERAPY OF CERTAIN TYPES OF MALIGNANT DISEASE
Robert Boynton, M.D., Physician, Medical Service, Providence Veterans Administration Hospital

11:30 a.m. BRONCHIOGENIC CARCINOMA
Herman A. Lawson, M.D., Chief, Medical Services, Providence Veterans Administration Hospital; President, R. I. Medical Society

12:00 GASTRIC ULCER AND STOMACH CANCER
Philip Cooper, M.D., Chief, Surgical Services, Providence Veterans Administration Hospital

12:30-1:30 p.m. Luncheon at the Hospital

1:30 p.m. Motion Picture: GASTROINTESTINAL CANCER — THE PROBLEM OF EARLY DIAGNOSIS

2:00 p.m. PALLIATIVE TREATMENT OF CANCER
Ira T. Nathanson, M.D., of Boston, Associate Visiting Surgeon, Massachusetts General Hospital; Assistant Professor of Surgery, Harvard Medical School

2:30 p.m. AIMS AND OBJECTIVES OF THE AMERICAN CANCER SOCIETY
Charles S. Cameron, M.D., of New York City, Medical and Scientific Director, American Cancer Society

3:00 p.m. PHYSICAL EXAMINATIONS IN INDUSTRY AS CANCER CASE FINDING PROCEDURE
C. D. Selby, M.D., of Ann Arbor, Michigan, Staff Member, School of Public Health, University of Michigan; Formerly Medical Director, General Motors Corporation

3:30 p.m. CANCER OF THE PROSTATE — EARLY DIAGNOSIS AND HORMONAL ASPECTS
J. Hartwell Harrison, M.D., of Boston

4:00 p.m. GENERAL DISCUSSION. QUESTIONS FROM AUDIENCE

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BOOK REVIEWS

continued from page 444

monopolar and bipolar techniques, describes artifacts and has a brief but very concise account of the special techniques of activating the EEG now coming into use. He also describes the very intricate and interesting machine devised by Grey Walter in England for electronic and mechanical analysis of the electroencephalogram, one of the few such machines in America being in Dr. Schwab's laboratory. Next there is a brief clinical discussion of epilepsy followed by an account of the EEG findings in this field and of the clinical correlates between the two, plus the usefulness of the EEG in differential diagnosis. After this comes a chapter on the electroencephalogram in neurological and neruosurgical problems. Dr. Schwab points out very clearly that while there is statistical correspondence between the amount and kinds of abnormality in the EEG with the clinical picture, in individual cases this correlation does not always hold. He emphasizes the findings in head injury, brain tumors, vascular disorders, subdural hematomata, etc.

In the next chapter on electroencephalography and psychiatry, Dr. Schwab shows that up to now, the technique has not been too helpful in this field except in those neuropsychiatric conditions which have definite cerebral nervous system organic concomitants. He does, however, point out the importance of electroencephalography in clinics where both electric shock and insulin coma are being used.

Following a stimulating discussion of the utility of the EEG in research, Dr. Schwab concludes with an intensely practical chapter on the proper organization of an EEG Department including requirements for machine, director, and technicians and then a most helpful discussion of ways of interpreting and using the records obtained.

This book should enable the practitioner to make a much more intelligent use of electroencephalography, to know where it is indicated and where it will not help and to be able to explain to the patient in advance of what the process will consist and thus reassure him.

As a final point it must be emphasized that the EEG is a laboratory procedure and subject to the same difficulties and points of view applicable to other laboratory procedures. It is of much more value when it is positive than when it is negative. It helps to confirm or to detract from a clinical diagnosis but never takes the place of the clinical opinion, which now, as always, is pre-eminent.

MAURICE W. LAUFER, M.D.

CURRENT THERAPY 1951. Edited by Howard F. Conn, M.D. W. B. Saunders Company, Phil., 1951. $10.00

Accuracy of diagnosis is the foundation of good practise. Armed with a correct diagnosis, the physician can treat his patient with agents proved effective in like circumstances. Improvement in method has been continuous. It is difficult to be sure of the most reliable.

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In this edition new methods have been introduced and others have been revised.

As with the previous edition, a copy has and will find its place on the desk for constant use by the conscientious practitioner and specialist who wishes his patients to have the best care available at the present time. Rational treatment schedules are then at hand for disease ranging from abdominal distention to zinc poisoning.

While reviewing this book, one treatment schedule for poisoning proved most useful.

RUSSELL P. HAGER, M.D.

THORACIC SURGERY by Richard H. Sweet, M.D., W. B. Saunders Company, Phil., 1950. $10.00

Although textbooks of surgery tend to be outdated a short time after they have left the press, this book by Dr. Sweet is a valuable addition to every surgeon's library. This, as in other contributions that he has made, is to be commended because it is based upon his own great experience and leaves out non-essentials and a large amount of redundant references to previous publications.

Adequate chapters are given to fundamentals which deal with surgical anatomy, details of suction, and the technique of operations. The confusing subject of segmental resection is well described and demonstrated with original diagrams. Everyone will read with special interest Chapters 8 and 9 which deal with "Surgery of the Esophagus" to which the author has made outstanding contributions.

Although this book is of special interest to thoracic surgeons, it is also valuable to the general surgeon since it deals with the thoraco-abdominal approach to lesions in the upper abdomen.

J. MURRAY BEARDSLEY, M.D.

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THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY by W. A. N. Dorland. 22nd ed. W. B. Saunders Company, Philadelphia, 1951. $10.00

This 22nd, 1736 page edition is again a nice piece of literary work. A good dictionary is an indispensable tool for the medical student and the writer. It should be consulted more often than it evidently is, judging, for example, from the frequently misused Latin and Greek terminology.

The reason is not clear for repeating the distressing "lymphopathia venereum," even if "venerea" follows within parentheses. Erythrodermia is rightly put as a synonym of erythroderma. Let us hope in future editions another will be added, viz., erythrodermy. Also, that the example of six other dictionaries be followed and "hydroa" be classed a female. In regard to signs and symptoms, especially to those with attached personal names, it would be nice to see them divided in two groups, the obsolete, of historical value, and those in everyday use by the diagnostician. Syndromes are largely represented, and this is of great help, with so many practically unknown outside the respective specialized fields.

The new edition is, as the previous ones, excellently printed and is highly recommended.

F. RONCHESE, M.D.

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THE NEUROSES by Walter C. Alvarez, M.D. W.B. Saunders Company, Phil., 1951. $10.00

Here is a book written by a real clinician tabulating his experiences of many years of practice.

It is a postgraduate course on the art of medicine for all physicians. Diagnosis and management of functional disorders and minor psychoses are presented in an easily readable style in very short order. It does not follow the psycho-analytic nor the objective school of thought but rather the common sense simple method of observation and study of the patient both mentally and physically.

This subject of psychogenic disease has not yet been discovered by many physicians. Alvarez shows the powerful effects of the brain on the body, and all the various symptoms that it can produce. In detail he discusses how to recognize the simple neuroses, mild psychoses, manic depressive temperaments, migrainous constitution, mild strokes, and the epileptic. He maintains that all these various disturbances result from a poor nervous heredity or low emotional reserve; that a person with a good nervous heredity does not develop these syndromes. The importance of taking the time to take a good history of the family background as a help to determine the origin of the patient's nervous troubles is greatly stressed.

It is a great book for all physicians to read.

MARK A. YESSIAN, M.D.

BELLINI, A. — Gerolamo Cardano e il suo tempo (Sec. XVI) — U. Hoepli — Milano — 1947.

Angelo Bellini (1872-1949), eminent letterato and medical historian, well-known dermatosyphilologist in Milan, and co-editor of the 84-year old Giornale Italiano di Dermatologia e Sifilografia, writes an interesting 327-page book on Hieronymus Cardanus (1501-1576), sixteenth century mathematician, inventor, physician, philosopher, orator, professor of medicine in Pavia, Padua, Bologna, traveler through France, England, and Germany at the invitation of scientists, cardinals, kings, and emperors, to teach and to "cure" illnesses declared incurable by the best local minds.

The "cures" of outstanding personalities of the time by ingestion of powdered horn, powdered bones, and especially powdered precious stones, as demonstrated by Cardanus' universal reputation, and consequent honor and wealth, makes one muse on what the intelligentsia will think of penicillin and cortisone 500 years from now.

People of the sixteenth century wore more clothes than in the present age, at least to the beach, if there were such things as public beaches in A.D. 1500. Thus, they were not much concerned about psoriasis, but they were suffering from asthma,

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gout, bloody lungs, purulent bronchitis, intestinal fevers and convulsions. Historical personages were "cured" by Cardanus with the aforementioned prescriptions.

Cardanus printed 120 books and left a score of unpublished works, all written in Latin. His lessons and speeches were also all in Latin, the only language permitted to the learned man, in contrast with what was used by the profanus vulgus. "The Divine Comedy" risked badly to end in the waste-basket, since it was written in Italian.

Among the inventions for which Cardanus will be remembered, is the cardanic or Cardan's suspension, a form of suspension in which the instrument is hung on gimbels so as to oscillate freely in all directions.

Cardanus' "Opera Omnia," represented by ten "in folio" volumes, is sleeping comfortably on libraries' shelves, with the exception of his autobiography, contemporary to that of Cellini. They offer different views of the time, and together they are invaluable in understanding the Italian "rinascimento."

Bellini's book is readable like fiction, but depicts the grim reality of human suffering and despair through wars, famines, and pestilences, and tells of efforts by the eminent minds of the time to solve the insolvable.

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PHYSICIANS SERVICE INCREASES BENEFITS

Physicians Service, the prepaid surgical-medical care program of the Rhode Island Medical Society, increased benefits without additional cost to subscribers, effective the 1st of August, it was announced by Dr. Joseph C. O'Connell, President of the non-profit plan.

Previously a maximum of $195 in surgical-medical benefits was available to all subscribers, but under the new program increased fees permit maximum benefits up to $290, Dr. O'Connell stated. Fees for surgeons have been increased from $150 to $225 in some of the major operation categories. Assisting surgeon's fees have been increased from a maximum of $15 to a new maximum of $25, and the maximum fees for Physician-Anesthetist have been increased from $20 to $30. The $10 fee for Physician-Transfusionist will remain the same. These benefits will be available to all Physicians Service subscribers whose operation takes place on or after August 1st.

In addition, the daily allowance for medical visits to non-surgical patients in the hospital, paid from the 4th through the 33rd day, has been increased from $3 to $4. This will be payable to hospitalized patients who are discharged on or after August 1st.

Dr. O'Connell, in making announcement of the increased benefits, said that the satisfactory experience of the Plan over the past year-and-a-half had led the Board of Directors to authorize the increases in the Master Schedule of Indemnities, which will not only provide greater allowances for the subscriber but more equitable fees to the doctors. In order to get the Plan started a year-and-a-half ago the doctors agreed to accept fees well below those then generally in effect. The new allowances are more in line with present-day fees, although still below the average charges.

As an example of how the increase in benefits will operate, Physicians Service authorities cited the case of a thyroid operation. Including the fees for the surgeon, assisting surgeon, physician-anesthetist and physician-transfusionist, the present maximum benefits have totaled $195; under the new fee schedule, the benefits will total a maximum of $290.

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Volume XXXIV, No. 9 September, 1951

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Outstanding Value . . .

Outstanding Nutritional Benefits

Whether the pocketbook calls for economy or permits satisfaction of that urge for the fanciest cuts, meat gives your patients full value for their money. Every cut and kind of meat supplies, *in abundance,* these essential nutrients:

1. Biologically complete protein . . . the kind which satisfies the requirements for growth and which is needed daily for tissue maintenance, antibody formation, hemoglobin synthesis, and good physical condition.
2. The essential B complex vitamins, thiamine, riboflavin, and niacin.
3. Essential minerals, including iron in particular.

In addition to these tangible values, meat ranks exceptionally high not only in taste and palate appeal, but also in satiety value.

The instinctive choice of meat as man's favorite protein food has behind it sound nutritional justification.*

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. *139*:897 (Apr. 2,) 1949

American Meat Institute

Main Office, Chicago... Members Throughout the United States